

## **Matthieu Bloch**

Matthieu Bloch received the Engineering degree from Sup\_elec, Gif-sur-Yvette, France, the M.S. degree in Electrical Engineering from the Georgia Institute of Technology, Atlanta, in 2003, the Ph.D. degree in Engineering Science from the Université de Franche-Comté, Besançon, France, in 2006, and the Ph.D. degree in Electrical Engineering from the Georgia Institute of Technology in 2008. In 2008-2009, he was a postdoctoral research associate at the University of Notre Dame, South Bend, IN, USA. Since July 2009, Dr. Bloch has been on the faculty of the School of Electrical and Computer Engineering at the Georgia Institute of Technology where he is currently an Assistant Professor. From 2009 to 2013, Dr. Bloch was based at the Georgia Tech Lorraine campus. His research interests are in the areas of information theory, error-control coding, wireless communications, and cryptography. Dr. Bloch is a member of the IEEE and has served on the organizing committee of several international conferences; he is the current chair of the Online Committee of the IEEE Information Theory Society. He is the co-recipient of the IEEE Communications Society and IEEE Information Theory Society 2011 Joint Paper Award and the co-author of the textbook *Physical-Layer Security: From Information Theory to Security Engineering* published by Cambridge University Press.

## **Helmut Bölcskei**

Helmut Bölcskei was born in Mödling, Austria on May 29, 1970, and received the Dipl.-Ing. and Dr. techn. degrees in electrical engineering from Vienna University of Technology, Vienna, Austria, in 1994 and 1997, respectively. In 1998 he was with Vienna University of Technology. From 1999 to 2001 he was a postdoctoral researcher in the Information Systems Laboratory, Department of Electrical Engineering, and in the Department of Statistics, Stanford University, Stanford, CA. He was in the founding team of Iospan Wireless Inc., a Silicon Valley-based startup company (acquired by Intel Corporation in 2002) specialized in multiple-input multiple-output (MIMO) wireless systems for high-speed Internet access, and was a co-founder of Celestius AG, Zurich, Switzerland. From 2001 to 2002 he was an Assistant Professor of Electrical Engineering at the University of Illinois at Urbana-Champaign. He has been with ETH Zurich since 2002, where he is Professor of Electrical Engineering. He was a visiting researcher at Philips Research Laboratories Eindhoven, The Netherlands, ENST Paris, France, and the Heinrich Hertz Institute Berlin, Germany. His research interests are in information theory, mathematical signal processing, learning theory, and statistics.

He received the 2001 IEEE Signal Processing Society Young Author Best Paper Award, the 2006 IEEE Communications Society Leonard G. Abraham Best Paper Award, the 2010 Vodafone Innovations Award, the ETH "Golden Owl" Teaching Award, is a Fellow of the IEEE, a 2011 EURASIP Fellow, a 2013-2014 Distinguished Lecturer of the IEEE Information Theory Society, and was an Erwin Schrödinger Fellow (1999-2001) of the Austrian National Science Foundation (FWF). He was a plenary speaker at several IEEE conferences and served as an associate editor of the IEEE Transactions on Information Theory, the IEEE Transactions on Signal Processing, the IEEE Transactions on Wireless Communications, and the EURASIP Journal on Applied Signal Processing. He was editor-in-chief of the IEEE Transactions on Information Theory during the period 2010-2013, and serves on the editorial boards of "Foundations and Trends in Networking", "Foundations and Trends in Communications and Information Theory", and the IEEE Signal Processing Magazine. He was TPC co-chair of the 2008 IEEE International Symposium on Information Theory and served on the Board of Governors of the IEEE Information Theory Society.

## **Mérouane Debbah**

Mérouane Debbah entered the Ecole Normale Supérieure de Cachan (France) in 1996 where he received his M.Sc and Ph.D. degrees respectively. He worked for Motorola Labs (Saclay, France) from 1999-2002 and the Vienna Research Center for Telecommunications (Vienna, Austria) until

2003. He then joined the Mobile Communications department of the Institut Eurecom (Sophia Antipolis, France) as an Assistant Professor until 2007. He is now a Full Professor at Supelec (Gif-sur-Yvette, France), holder of the Alcatel-Lucent Chair on Flexible Radio and a recipient of the ERC grant MORE (Advanced Mathematical Tools for Complex Network Engineering). His research interests are in information theory, signal processing and wireless communications. He is a senior area editor for IEEE Transactions on Signal Processing and an Associate Editor in Chief of the journal Random Matrix: Theory and Applications. Mérouane Debbah is the recipient of the "Mario Boella" award in 2005, the 2007 General Symposium IEEE GLOBECOM best paper award, the Wi-Opt 2009 best paper award, the 2010 Newcom++ best paper award, the WUN CogCom Best Paper 2012 and 2013 Award, the 2014 WCNC best paper award as well as the Valuetools 2007, Valuetools 2008, CrownCom2009 and Valuetools 2012 best student paper awards. In 2011, he received the IEEE Glavieux Prize Award and in 2012, the Qualcomm Innovation Prize Award. He is a WWRF fellow and a member of the academic senate of Paris-Saclay.

### **Albert Guillén i Fàbregas**

Albert Guillén i Fàbregas was born in Barcelona in 1974. In 1999 he received the Telecommunication Engineering Degree and the Electronics Engineering Degree from Universitat Politècnica de Catalunya and Politecnico di Torino, respectively, and the Ph.D. in Communication Systems from Ecole Polytechnique Fédérale de Lausanne (EPFL) in 2004.

Since 2011 he has been a Research Professor of the Institució Catalana de Recerca i Estudis Avançats (ICREA) at the Department of Information and Communication Technologies, Universitat Pompeu Fabra. He is also an Adjunct Researcher at the Department of Engineering, University of Cambridge, where he was a Reader and a Fellow of Trinity Hall. He has held appointments at the New Jersey Institute of Technology, Telecom Italia, European Space Agency (ESA), Institut Eurécom, University of South Australia, as well as visiting appointments at Ecole Nationale des Télécommunications (Paris), Universitat Pompeu Fabra, University of South Australia, Centrum Wiskunde & Informatica and Texas A&M University in Qatar. His research interests are in information theory, coding theory and communication theory.

Dr. Guillén i Fàbregas received the Starting Grant from the European Research Council, the Young Authors Award of the 2004 European Signal Processing Conference, the 2004 Best Doctoral Thesis Award from the Spanish Institution of Telecommunications Engineers, and a Research Fellowship of the Spanish Government to join ESA. He is an Associate Editor of the IEEE Transactions on Information Theory and of the Foundations and Trends in Communications and Information Theory, Now Publishers. He is also a Senior Member of IEEE, a member of the Young Academy of Europe and was an Editor of the IEEE Transactions on Wireless Communications (2007-2011).

### **Dongning Guo**

Dongning Guo joined the faculty of Northwestern University, Evanston, IL, in 2004, where he is currently an Associate Professor in the Department of Electrical Engineering and Computer Science. He received the B.Eng. degree from the University of Science and Technology of China, the M.Eng. degree from the National University of Singapore, and the M.A. and Ph.D. degrees from Princeton University, Princeton, NJ. He was an R&D Engineer in the Center for Wireless Communications, Singapore, from 1998 to 1999. He has held visiting positions at the Norwegian University of Science and Technology in summer 2006 and the Institute of Network Coding, the Chinese University of Hong Kong in 2010-2011.

Dr. Guo has served as an Associate Editor of IEEE Transactions on Information Theory in the area of Shannon Theory and a Guest Editor for the IEEE Journal on Selected Areas in Communications Special Issue on Full-duplex Wireless Networks. He is also an Editor of Foundations and Trends in Communications and Information Theory. He has served on

several TPCs of the ISIT and ITW. He was also a co-chair of the Technical Program and Local Arrangements for the 2nd North American School of Information Theory held at Northwestern University in 2009.

Dr. Guo is a recipient of the National Science Foundation Faculty Early Career Development (CAREER) Award in 2007. He is also a co-recipient of the IEEE Marconi Prize Paper Award in Wireless Communications in 2010. His student co-author, Lei Zhang, received the ISIT Student Paper Award in 2011.

### **Stephen Hanly**

Stephen Hanly received his B.Sc. (Hons) and M.Sc. from the University of Western Australia, and the Ph.D. degree in mathematics in 1994 from Cambridge University, UK. From 1993 to 1995, he was a Post-doctoral member of technical staff at AT&T Bell Laboratories in Murray Hill, New Jersey, USA. From 1996 to 2009 he was on the research and teaching staff at the University of Melbourne, and between 2010 and 2011 he was an Associate Professor at the National University of Singapore. He returned to Australia in 2012 to take up the CSIRO-Macquarie University Chair in Wireless Communications at Macquarie University.

Prof Hanly was a co-recipient of the *1998 IEEE Infocom* best paper award, and, in 2001, he was a co-recipient of the inaugural *IEEE Information Theory Society and IEEE Communication Society* joint best paper award. He was an Associate Editor for *IEEE Transactions on Wireless Communications* from 2005-2009, a guest editor for the *IEEE Journal on Selected Areas in Communications* special issue on "Cooperative Communications in MIMO Cellular Networks" in 2010, and for the special issue on "5G Wireless Communication Systems" in 2014. He was a guest editor for *EURASIP Journal of Wireless Communications and Networking*, special issue on "Recent Advances in Optimization Techniques in Wireless Communication Networks" in 2012. In 2005, he was the technical co-chair for the *IEEE International Symposium on Information Theory* held in Adelaide, Australia, and he will again be the technical co-chair in 2017, with the Symposium to be held in Aachen, Germany. He is the technical co-chair of the *IEEE International Symposium on Information Theory and its Applications (ISITA)* to be held in Melbourne in 2014, and he has been the General Chair of the *IEEE Australian Communication Theory Workshop (AusCTW)*, held in Sydney in February 2014.

### **Amir K. Khandani**

Amir K. Khandani is a Professor of Electrical and Computer Engineering, University of Waterloo, and holds an NSERC Industrial Research Chair on "Network Information Theory" (second round) and a Tire I Canada Research Chair on "Wireless Systems" (second round).

He received his M.A.Sc. degree from University of Tehran in 1985, and his Ph.D. degree from McGill University in 1992. From 1985 to 1988, he worked as a design engineer in Iran Communication Industries Ltd. on circuit design for telecommunication systems. From 1992 to 1993, he worked as a Research Associate at INRS Telecommunications (Quebec University) in Montreal, and then joined University of Waterloo in 1993.

Dr. Khandani has served as an Associate Editor for the *IEEE Transactions on Communications* in the area of Coding and Communication Theory and as the chair of the Information Theory Chapter of the regional IEEE (awarded the best Chapter of the year in 2009).

### **Urbashi Mitra**

Urbashi Mitra received the B.S. and the M.S. degrees from the University of California at Berkeley and her Ph.D. from Princeton University. After a six year stint at the Ohio State University, she

joined the Department of Electrical Engineering at the University of Southern California, Los Angeles, where she is currently a Professor. She is a member of the IEEE Information Theory Society's Board of Governors (2002-2007, 2012-2014) and the IEEE Signal Processing Society's Technical Committee on Signal Processing for Communications and Networks (2012-2014). Dr. Mitra is a Fellow of the IEEE. She is the recipient of: 2012 Globecom Signal Processing for Communications Symposium Best Paper Award, 2012 NAE Lillian Gilbreth Lectureship, USC Center for Excellence in Research Fellowship (2010-2013), the 2009 DCOSS Applications & Systems Best Paper Award, Texas Instruments Visiting Professor (Fall 2002, Rice University), 2001 Okawa Foundation Award, 2000 OSU College of Engineering Lumley Award for Research, 1997 OSU College of Engineering MacQuigg Award for Teaching, and a 1996 National Science Foundation (NSF) CAREER Award. Dr. Mitra currently serves on the IEEE Fourier Award for Signal Processing committee and the IEEE James H. Mulligan, Jr. Education Medal committee. She has been/is an Associate Editor for the following IEEE publications: Transactions on Signal Processing (2012--), Transactions on Information Theory (2007-2011), Journal of Oceanic Engineering (2006-2011), and Transactions on Communications (1996-2001). She has co-chaired: (technical program) 2014 IEEE International Symposium on Information Theory in Honolulu, HI, 2014 IEEE Information Theory Workshop in Hobart, Tasmania, IEEE 2012 International Conference on Signal Processing and Communications, Bangalore India, and the IEEE Communication Theory Symposium at ICC 2003 in Anchorage, AK; and general co-chair for the first ACM Workshop on Underwater Networks at Mobicom 2006, Los Angeles, CA. Dr. Mitra was the Tutorials Chair for IEEE ISIT 2007 in Nice, France and the Finance Chair for IEEE ICASSP 2008 in Las Vegas, NV. Dr. Mitra has held visiting appointments at: the Delft University of Technology, Stanford University, Rice University, and the Eurecom Institute. She served as co-Director of the Communication Sciences Institute at the University of Southern California from 2004-2007. In addition to the roles already mentioned, she has served/serves the IEEE Information Theory Society as: Membership Chair, Outreach Committee member, Awards Committee member, etc. Her research interests are in: wireless communications, communication and sensor networks, detection and estimation and the interface of communication, sensing and control.

### **Ralf Müller**

(S'96--M'03--SM'05) was born in Schwabach, Germany, 1970. He received the Dipl.-Ing. and Dr.-Ing. degree with distinction from Friedrich-Alexander-Universität (FAU) Erlangen-Nürnberg in 1996 and 1999, respectively. From 2000 to 2004, he directed a research group at The Telecommunications Research Center Vienna in Austria and taught as an adjunct professor at TU Wien. In 2005, he was appointed full professor at the Department of Electronics and Telecommunications at the Norwegian University of Science and Technology in Trondheim, Norway. In 2013, he joined the Institute for Digital Communications at FAU Erlangen-Nürnberg in Erlangen, Germany. He held visiting appointments at Princeton University, US, Institute Eurécom, France, University of Melbourne, Australia, University of Oulu, Finland, National University of Singapore, Babes-Bolyai University, Cluj-Napoca, Romania, Kyoto University, Japan, FAU Erlangen-Nürnberg, Germany, and TU München, Germany.

Dr. Müller received the Leonard G. Abraham Prize (jointly with Sergio Verdú) for the paper "Design and analysis of low-complexity interference mitigation on vector channels" from the IEEE Communications Society. He was presented awards for his dissertation "Power and bandwidth efficiency of multiuser systems with random spreading" by the Vodafone Foundation for Mobile Communications and the German Information Technology Society (ITG). Moreover, he received the ITG award for the paper "A random matrix model for communication via antenna arrays" as well as the Philipp-Reis Award (jointly with Robert Fischer). Dr. Müller served as an associate editor for the IEEE TRANSACTIONS ON INFORMATION THEORY from 2003 to 2006. He is currently serving on the executive editorial board of the IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS.

## **H. Vincent Poor**

(H. Vincent Poor Ph.D., Princeton, 1977) is the Dean of the School of Engineering and Applied Science at Princeton University, where he is also the Michael Henry Strater University Professor. Prior to joining the Princeton faculty in 1990, he was on the faculty of the University of Illinois. He has also held visiting appointments at several other universities, including most recently at Stanford and Imperial College. His research interests include information theory, statistical signal processing and stochastic analysis, with applications in wireless networks and related fields. Among his publications in these areas is the recent book *Mechanisms and Games for Dynamic Spectrum Allocation* (Cambridge University Press, 2014).

Vince is an IEEE Fellow and a member of the NAE, the NAS and the Royal Society. He served as President of the IT Society in 1990 and as EIC of the *IT Transactions* in 2004-07. He is currently serving as a member of the Executive Editorial Board of the *Transactions*, and as an IT Society Distinguished Lecturer. He received a Guggenheim Fellowship in 2002, and the IT Society's Aaron D. Wyner Distinguished Service Award in 2008. Recent recognition of his work includes the 2014 URSI Booker Gold Medal, and honorary doctorates from Aalborg University, HKUST and the University of Edinburgh.

## **Aylin Yener**

Aylin Yener is a professor of Electrical Engineering at The Pennsylvania State University since 2010. She joined Penn State's faculty as an assistant professor in 2002, and was an associate professor 2006-2010. During the academic year 2008-2009, she was a visiting associate professor of Electrical Engineering at Stanford University. She received the B.Sc. degree in electrical and electronics engineering, and the B.Sc. degree in physics, from Bogazici University, Istanbul, Turkey; and the M.S. and Ph.D. degrees in electrical and computer engineering from Wireless Information Network Laboratory (WINLAB), Rutgers University, New Brunswick, NJ. Yener received the CAREER award from the National Science Foundation in 2003, and was a member of the young investigator team on the DARPA program for Information Theory for Mobile Ad Hoc Networks (ITMANET) 2006-2011.

Yener's previous service to IEEE includes being technical program chair of various conferences for the IEEE Communications Society, an associate editor for the IEEE Transactions on Communications, an associate editor and an editorial advisory board member for the IEEE Transactions on Wireless Communications.

Yener's research interests are in information theory, fundamental performance limits of networked systems, information security and energy harvesting communications. In particular, she continues to advocate for the impact of information theory on design insights and understanding of networked and complex systems.

Her service to IEEE Information Theory Society includes various positions in organizing ISIT 2011, 2012, 2013. She served as the student committee chair for the IEEE Information Theory Society 2007-2011, and was the co-founder of the Annual School of Information Theory in North America (with Gerhard Kramer), co-organizing the school in years 2008, 2009 and 2010. She has served on the board of governors of the IEEE Information Theory Society as its treasurer 2012-2014.

## **Wei Yu**

Wei Yu (S'97-M'02-SM'08-F'14) received the B.A.Sc. degree in Computer Engineering and Mathematics from the University of Waterloo, Waterloo, Ontario, Canada in 1997 and M.S. and Ph.D. degrees in Electrical Engineering from Stanford University, Stanford, CA, in 1998 and 2002, respectively. Since 2002, he has been with the Electrical and Computer Engineering Department

at the University of Toronto, Toronto, Ontario, Canada, where he is now Professor and holds a Canada Research Chair (Tier 1) in Information Theory and Wireless Communications. His main research interests include network information theory, optimization, wireless communications and broadband access networks.

Prof. Wei Yu served as an Associate Editor for IEEE Transactions on Information Theory (2010-2013), as an Editor for IEEE Transactions on Communications (2009-2011), as an Editor for IEEE Transactions on Wireless Communications (2004-2007), and as a Guest Editor for a number of special issues for the IEEE Journal on Selected Areas in Communications and the EURASIP Journal on Applied Signal Processing. He was a Technical Program Committee (TPC) co-chair of the Communication Theory Symposium at the IEEE International Conference on Communications (ICC) in 2012, a TPC co-chair of the IEEE Communication Theory Workshop in 2014, and the Finance Chair for the IEEE International Symposium on Information Theory (ISIT) in 2008. He was a member of the Signal Processing for Communications and Networking Technical Committee of the IEEE Signal Processing Society (2008-2013). Prof. Wei Yu received an IEEE ICC Best Paper Award in 2013, an IEEE Signal Processing Society Best Paper Award in 2008, the McCharles Prize for Early Career Research Distinction in 2008, the Early Career Teaching Award from the Faculty of Applied Science and Engineering, University of Toronto in 2007, an Early Researcher Award from Ontario in 2006, and an NSERC Discovery Accelerator Supplement Award in 2012. Prof. Wei Yu is a registered Professional Engineer in Ontario. He is a Fellow of IEEE.